



AUDIO

FAQ

Q I've fallen for the new iPod nano, but I'm worried that my noisy commute will drown it out. What are noise-cancelling headphones, and will they help?

A Most MP3 players come with bud-type earphones that fit into the ear. They're not a very effective barrier to outside noise, so most passes straight through. This can help pedestrians stay aware of their surroundings, but it becomes tempting to turn music up.

Some headphones have drivers with closed backs, which form a physical barrier to noise. These muffle external sounds and less music leaks out, so they're good for listening on public transport. Closed earphones are available that push into the ear canal, forming a seal, but many people find these uncomfortable.

Noise-cancelling headphones such as Sennheiser's PXC 250s, reviewed on page 21, use battery-powered electronics to counteract noise. A small microphone near each ear detects ambient sound, which is amplified and mixed in with the music signal sent to the driver. The phase of each sound is inverted, however, and the noise created by the driver almost cancels out the original, leaving near-silence.

This works best with regular low-frequency sounds such as engine noise; speech or music will leak through. The effect is dramatic, though, and a good pair of noise-cancelling headphones will let you enjoy your music at lower a volume.

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REVIEW SOUND CARD

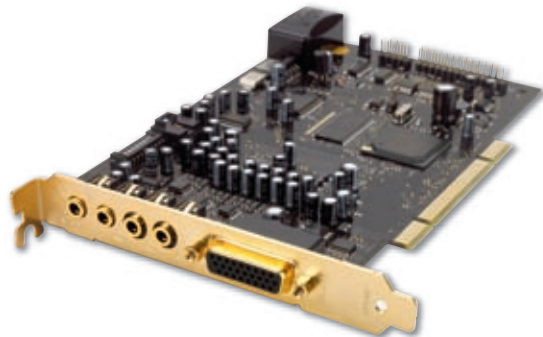
CREATIVE
Sound Blaster X-Fi
XtremeMusic

RATING ★★★★★

PRICE £99 inc VAT

SUPPLIER www.misco.co.uk

DETAILS <http://uk.europe.creative.com>



These days almost every motherboard has its own built-in sound chip, which can comfortably handle everyday music and games. Pricier boards come with multiple-channel surround sound and digital interfaces, so is it worth investing in a dedicated sound card?

Creative certainly thinks so, and has just released four PCI cards that replace its internal Audigy line-up. The X-Fi XtremeMusic reviewed here is the most affordable model and can record or play back sound at up to 24-bit, 96kHz quality. The more expensive Platinum version uses the same PCI card, but comes with a remote control and an I/O module that sits in a 5¼" drive bay.

All four cards have a software control panel that places the audio-processing chip into one of three modes for entertainment, audio or game use. Creative says each mode directs flexible resources to the task in hand, improving the results, but it's a pity the drivers can't make the choice for you.

We were interested to see whether the X-Fi's audio quality was significantly better than that of a typical motherboard chipset, such as the Realtek ALC860 on our Intel reference board. We used a short 3.5mm jack cable to connect the input and output of each card, and ran RightMark Audio Analyzer's loopback test on both. The X-Fi's results were markedly better than the onboard sound chip's. It recorded an impressively high signal-to-noise ratio of 101.5dB(A), compared with our

motherboard's 78dB(A), and the response curve was flatter, even at high frequencies of 30kHz or more.

Music files sounded brighter and more detailed through the X-Fi than from the onboard chip, but the improvement wasn't overwhelming. You probably wouldn't notice the difference unless you can tell a 128kbit/s MP3 file from a CD track and have a decent set of speakers, for example.

This card supports a range of surround-sound decoding, including recent 7.1 standards such as DTS ES and Dolby Digital EX. It also has Creative's EAX Advanced HD 5.0 processing, designed to improve the quality of sound in games. Few current titles support this, but the included Doom 3 patch proved that it delivers great things. In truth, the game's improved soundtrack gave us the fear.

It's not cheap, but this sound card is a definite step up from an onboard device, particularly if you're a keen gamer. It's good for music playback too, but there are cheaper cards that are more suitable for high-quality audio use.

Simon Handby



Sounds good for music; EAX sound processing enhances games



Not yet widely supported among games; no RCA outputs

SPECIFICATIONS Line, mic and optical S/PDIF inputs, four line (7.1) outputs, joystick port, PCI interface. **Part code** 70SB046002010

HOTLIST 2.1 SPEAKERS

TRUST
2.1 Speaker Set SP-3600A

RATING ★★★★★

PRICE £32 inc VAT

SUPPLIER www.microdirect.co.uk

DETAILS www.trust.com



These classy speakers have a remote that includes a volume control, line input and headphone socket. Sound quality was

extremely good in our tests, with solid bass and detailed mid and high frequencies. They aren't massively loud, and the satellite cables are only 1.5 metres long, but they're great value.

SPECIFICATIONS 2.1 speakers, line and aux inputs, 28W RMS power. **Part code** 14235



HOTLIST SOUND CARD

CREATIVE
Audigy 2 ZS

RATING ★★★★★

PRICE £63 inc VAT

SUPPLIER www.savastore.com

DETAILS <http://uk.europe.creative.com>

The inputs and outputs on Creative's Audigy 2 ZS are capable of 24-bit,

96kHz recording and playback for increased clarity. Specialist sound cards have better signal-to-noise performance, but the Audigy's unsurpassed games effects, excellent games bundle and exhaustive DVD-Video and DVD-Audio support make it a great buy for avid gamers and music enthusiasts.

SPECIFICATIONS Line, mic and optical S/PDIF inputs, four line (7.1) outputs, FireWire, PCI interface. **Part code** 70SB035000005



HOTLIST SURROUND SPEAKER SET

LOGITECH
Z-5500

RATING ★★★★★

PRICE £205 inc VAT

SUPPLIER www.dabs.com

DETAILS www.logitech.co.uk

Logitech's 5.1 Z-5500 speakers have what it takes to satisfy most people's surround-sound needs. They're powerful enough to shake the house with 505W RMS, and they deliver rich bass thanks to the large sub-woofer.

The speakers are THX-certified and come with a DTS and Dolby Digital decoder, so you can plug in a DVD player as well as a PC.

SPECIFICATIONS 5.1 surround sound, 505W RMS, optical and coaxial digital inputs, three stereo inputs, Dolby Digital and DTS decoder. **Part code** 970115-0120



REVIEW IPOD SPEAKER DOCK

MONITOR AUDIO i-deck

RATING ★★

PRICE £250 inc VAT

SUPPLIER www.i-deckshop.co.uk

DETAILS www.i-deck.co.uk

In *What's New*, *Shopper* October 2005, we reviewed Bose's SoundDock. This similar product from Monitor Audio includes multiple bezels that let you dock an iPod or iPod mini. The iPod charges while connected, and you can skip and fast-forward tracks using a remote.

Unlike the SoundDock, the i-deck lets you synchronise a docked iPod with a computer using an iPod data cable, while a regular line-in socket enables you to hook up other audio sources.



The i-deck comes in three sections, so you can move the speakers to improve stereo separation. This gives it an advantage over the SoundDock, but we weren't as impressed with this product's sound.

It's very loud, but the mid-range and high-end response seemed uneven. Some vocal frequencies sounded harsh and music wasn't generally as clear as we would expect.

The i-deck improves on Bose's product in some ways but is weaker in others, and both seem expensive.

Simon Handby

✓ **Good integration with iPod; loud**

✗ **Far too expensive; unimpressive sound quality**

SPECIFICATIONS Stereo sound, iPod dock input and 3½mm line-in socket

REVIEW MP3 PLAYER

APPLE iPod nano 2GB

RATING ★★★★★

PRICE £140 inc VAT

SUPPLIER www.anvika.co.uk

DETAILS www.ipod.com



What the nano is really designed for, though, is music playback. There's no custom EQ setting, but tunes sound fine through the standard earphones using the Rock preset.

Despite its thin body, the player's metal back makes it feel robust. Its battery life of 14½ hours is good but over 10 hours shorter than that of the last iPod mini we tested. Next to the mini, the nano seems overpriced.

However, the nano's lovely design and small size still make it very special.

Simon Handby

✓ **Sleek-looking MP3 player with good sound and a colour screen**

✗ **Shorter battery life and higher price than the iPod mini**

SPECIFICATIONS Solid-state MP3 player, 2GB capacity, USB Hi-Speed interface. **Part code** MA004FB/A

In just one year the iPod mini (see below) has come to account for half of all iPod sales, so it's a surprise that the iPod nano is set to replace it. The nano is far thinner than the mini and uses flash memory rather than a hard disk, making it skip-free and less susceptible to shock damage.

The iPod nano looks like the slim offspring of an iPod photo and is almost identical in use. Its colour screen even displays pictures.

HOTLIST HARD DISK MP3 PLAYER

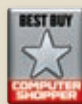
APPLE iPod mini 6GB

RATING ★★★★★

PRICE £161 inc VAT

SUPPLIER www.amazon.co.uk

DETAILS www.apple.com/uk



Apple has endowed new iPod minis with a longer battery life: this 6GB model lasted more than 24 hours in our tests. There's no custom EQ, it won't play WMAs and you'll need to stick to iTunes for downloading music, but if that doesn't bother you, this is the best compact player.

SPECIFICATIONS 6GB capacity, USB Hi-Speed interface, MP3, AAC, WAV, AIFF and Audible playback. **Part code** M9803B/A

HOTLIST HARD DISK MP3 PLAYER

SONY NW-HD5 20GB

RATING ★★★★★

PRICE £168 inc VAT

SUPPLIER www.amazon.co.uk

DETAILS www.sony.co.uk



The NW-HD5 looks and sounds superb, and is more compact than most MP3 players with a 1.8" disk. It doesn't play WMA files, though, so it can't be used with stores such as Napster. The player's removable battery lasted 30 hours in our test. It's great value if you don't buy music online.

SPECIFICATIONS 20GB capacity, USB Hi-Speed interface, MP3, ATRAC3, ATRAC3plus. **Part code** NWHD5R

CHOOSING A...

SOUND CARD



Pick up the beat with our guide to selecting the best sound card

1 A sound card with the specs below can cost as little as £10, but it's worth spending more for improved sound quality. If you're upgrading, consider paying extra for other exciting features.

2 DVD enthusiasts will need a Dolby Digital decoder for surround-sound DVD audio. This is built into most DVD playback software, so a 5.1 output sound card will suffice. PowerDVD and WinDVD software comes in two-channel and six-channel versions. Make sure you have the six-channel version for surround playback.

3 Games enthusiasts will appreciate surround sound, but support for 3D standards adds further excitement. DirectSound 3D allows sounds to pan around the speakers; Sensaura and Aureal technologies make the effect even more convincing. EAX simulates the acoustics of games environments. EAX Advanced HD enhances the capabilities of EAX in compatible games.

4 Those serious about audio fidelity require high-quality digital-to-analogue and analogue-to-digital converters (DACs and ADCs). Most PC audio runs at 16-bit, 44.1kHz, but higher-specified DACs and ADCs running at 24-bit, 96kHz perform better. Creative Audigy 2 cards play DVD Audio discs, including a stereo 192kHz recording and a surround 24/96 recording.

5 For music production, get a card with all the analogue and digital connections to wire up the rest of your studio gear, plus ASIO drivers for better performance in compatible software.

6 PCI is the standard interface for sound cards, although some add an external or drive bay-mounted expansion box for extra sockets. USB devices are also available to meet most needs.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

INPUTS: Mic, line

OUTPUTS: Three line (5.1 surround)

CONVERTER SPECIFICATION:

16-bit, 44.1kHz

3D SUPPORT: DirectSound 3D

INTERFACE: PCI